

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 26 JUL 2006

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|---|---|---|-----------------------|
| Applicant's or agent's file reference<br>742587   | <b>FOR FURTHER ACTION</b>   |   | See Form PCT/IPEA/416 |
| International application No.<br><b>PCT/AU2005/000496</b>   | International filing date ( <i>day/month/year</i> )<br>6 April 2005 | Priority date ( <i>day/month/year</i> )<br>7 April 2004 |                       |
| International Patent Classification (IPC) or national classification and IPC<br><br>Int. Cl.<br><br><b>C22B 15/06</b> (2006.01) <b>C22B 5/10</b> (2006.01) <b>C22B 5/12</b> (2006.01) |   |   |                       |
| Applicant<br><b>AUSMELT LIMITED et al</b>   |   |   |                       |

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
  - ☐ (*sent to the applicant and to the International Bureau*) a total of      sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s))      , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

## 4. This report contains indications relating to the following items:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |

|   |  |
|---|--|
| Date of submission of the demand<br>25 November 2005  | Date of completion of this report<br>12 July 2006                                |
| Name and mailing address of the IPEA/AU<br>AUSTRALIAN PATENT OFFICE<br>PO BOX 200, WODEN ACT 2606, AUSTRALIA<br>E-mail address: pct@ipaustalia.gov.au<br>Facsimile No. (02) 6285 3929 | Authorized Officer<br><br><b>MATTHEW FRANCIS</b><br>Telephone No. (02) 6283 2424 |

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on:

☒ The international application in the language in which it was filed

☐ A translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3(a) and 23.1 (b))

☐ publication of the international application (under Rule 12.4(a))

☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☒ the international application as originally filed/furnished

☐ the description:

pages as originally filed/furnished

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☐ the claims:

pages as originally filed/furnished

pages\* as amended (together with any statement) under Article 19

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☐ the drawings:

pages as originally filed/furnished

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Claims 1-15 | YES |
|                               | Claims      | NO  |
| Inventive step (IS)           | Claims 1-15 | YES |
|                               | Claims      | NO  |
| Industrial applicability (IA) | Claims 1-15 | YES |
|                               | Claims      | NO  |

## 2. Citations and explanations (Rule 70.7)

D1: US 1922301

NOVELTY (N), INVENTIVE STEP (IS)

Claims 1-15: D1 represents the closest available art. It discloses a method of converting matte to metal for metals such as copper or lead. The method consists of charging the converter with liquid matte, slag and metal to a desired level and introducing streams of air together with fuels and fluxes into the matte layer. This is effected by lances in the form of vertically adjustable tubes. The stream of air is directed downwardly into the converter, in such a way that the molten metal at the bottom of the converter is not affected. The claimed invention differs from D1 in that the matte is dispersed in the slag layer and the air is added to the combined layer of matte and slag. This feature is not disclosed or suggested by the prior art. Hence these claims are considered both novel and inventive.